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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GUY M. DANNER, RICHARD M. WEBBER,
RICHARD J. PAOLINI, JR., and LIBING ZHANG

Appeal 2009-007430
Application 10/604,630
Technology Center 2600

Before, ROBERT E. NAPPI, THOMAS S. HAHN, and
ELENI MANTIS MERCADER, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL¹

¹The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

This is a decision on appeal under 35 U.S.C. § 134(a) of the final rejection of claims 2-3, 5-6, 11, and 22-25.² We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

INVENTION

The invention is directed to an electro-optic display and a means for reducing heat generated by its components that includes an air gap and a layer of thermally conducting material. *See* Spec: 1-17. Claim 11 is representative of the invention and reproduced below:

11. An electro-optic display comprising:
 - a layer of reflective electro-optic material capable of changing its optical state on application of an electric field thereto;
 - an electrode arranged to apply an electric field to the layer of electro-optic material;
 - a heat generating component in heat conducting relationship with the layer of electro-optic material, the heat generating component being disposed on the opposed side of the electrode from the layer of electro-optic material; and
 - a layer of thermally conducting material disposed between the heat generating component and the electrode, and an air gap present between the electrode and the layer of thermally conducting material, the layer of thermally conducting material and the air gap extending across the whole area of the layer of electro-optic material.

² Claims 4 and 12-21 were cancelled in an Amendment After Final, filed January 10, 2007. Claims 1, 7-10, and 26 were cancelled in an Amendment After Non-Final, filed July 30, 2007.

REFERENCES

| | | |
|-----------|-----------------|---------------|
| Leibowitz | US 4,689,110 | Aug. 25, 1987 |
| Sato | US 5,869,919 | Feb. 9, 1999 |
| Duthaler | US 6,312,304 B1 | Nov. 6, 2001 |

REJECTION AT ISSUE

Claims 2-3, 5-6, 11, and 22-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Duthaler in view of Leibowitz and Sato. Ans. 4-8.

ISSUE

Appellants argue on pages 11-15 of the Appeal Brief that the Examiner's rejection of claims 2-3, 5-6, 11, and 22-25 is in error. We select independent claim 11 as representative of the group comprising claims 2-3, 5-6, and 22-25 since Appellants do not separately argue these claims with particularity. *See* 37 C.F.R. § 41.37(c)(1)(vii). Appellants argue that it is not obvious to combine Sato with Duthaler and Leibowitz. App. Br. 12.

Thus, with respect to claim 11, Appellants' contention presents us with the issue: Did the Examiner err in finding it obvious to combine Duthaler with Leibowitz and Sato?

ANALYSIS

Appellants' contentions have not persuaded us of error in the Examiner's rejection of claim 11. Appellants argue that it would not be

obvious to combine Sato with Duthaler and Leibowitz since the purpose of the air gap in Sato is to ensure that the high heat generating plasma display is cooled. App. Br. 12. In Duthaler, the display generates negligible heat and, therefore, the air gap would not be necessary. App. Br. 12-14. Regardless, the Examiner finds that Sato's air gap is not only used to cool the display but is also used to cool the drive circuits. Ans. 9. The Examiner also finds that Duthaler discloses a need to cool drive circuits, as well. Ans. 9. Therefore, it would be obvious to combine Sato with Duthaler and Leibowitz.

Additionally, even though Duthaler's display does not produce high heat, Appellants' arguments are not persuasive. The Supreme Court has stated that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). As found by the Examiner and admitted by Appellants, Duthaler discloses electro-optic material, an electrode, and a heat generating component. App. Br. 11; Ans. 1. Leibowitz discloses a circuit board that acts as a heat shield with thermally conducting material. App. Br. 11; Ans. 5. Sato discloses a display device with an air gap. App. Br. 13; Ans. 5. All of these references deal with the manufacturing and packaging of circuits. Therefore, we consider using Leibowitz's circuit and conducting material and Duthaler's electro-optic material, electrode, and heat generating component with Sato's air gap design as nothing more than using known elements and design methods to keep devices cool. As such, we find that the combination of Sato with Duthaler and Leibowitz yields the predictable result of cooling a device.

Appellants additionally argue that the function of the air gap in the present invention is different than the function of the air gap in Sato. App. Br. 14. As identified by the Examiner, representative claim 11 does not recite the function of the air gap. Ans. 9. Further while the purpose of the air gap may be different in Sato than in the present invention since the air gap can perform its known function of cooling components, it is properly combined with the teachings of other references. As such, we do not find Appellants' arguments to be persuasive and we sustain the Examiner's rejection of claim 11 and claims 2-3, 5-6, and 22-25 that have been grouped with claim 11.

CONCLUSION

The Examiner did not err in finding it obvious to combine Duthaler with Leibowitz and Sato.

SUMMARY

The Examiner's decision to reject claims 2-3, 5-6, 11, and 22-25 under 35 U.S.C. § 103(a) is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136 (a)(1)(iv).

Appeal 2009-007430
Application 10/604,630

AFFIRMED

ELD

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